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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR       | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|-----------------|-------------|----------------------------|----------------------|------------------|
| 09/898,845      | 07/03/2001  | John Charles Baumhauer JR. | Baumhauer 15-11-8-43 | 1473             |

7590 04/21/2005  
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EXAMINER

FAULK, DEVONA E

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2644

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/898,845

Applicant(s)

BAUMHAUER ET AL.

Examiner

Devona E. Faulk

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

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**DETAILED ACTION**

1. Claims 1-5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in the reply filed on 10/22/2004.

***Drawings***

2. The drawings are objected to because of line quality, Figures 6-8 in particular. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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*Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 6-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Allen et al. (U.S. Patent 5,848,172).

Claims 6,10 share common elements.

Regarding claims 6 and 10, Allen discloses a microphone assembly in a communication device (column 6, lines 24,25), said microphone assembly comprising:

a microphone element (305, figures 3 and 4; column 3, line 20) adapted to convert acoustic energy into electrical energy;

an acoustic transmission line adapted to transmit acoustic energy received at the input port of said acoustic transmission line to an output port of said acoustic transmission line coupled to said microphone element (301, figures 3 and 4; column 3, lines 19-20);

at least one acoustic impedance element placed within said acoustic transmission line having a specific acoustic resistance that matches the specific acoustic characteristic resistance of said acoustic transmission line (column 3, lines 36-40);

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wherein the relative time and phase delays of acoustic energy propagating through said acoustic transmission line is proportional to the length of said acoustic transmission line due to the elimination of standing waves (column 3, lines 32-45; column 4, lines 35-40).

All elements of claims 7 and 11 are comprehended by the rejection of claims 6 and 10 (column 3, lines 5-10).

5. Claims 8 and 12 share common elements.

Regarding claims 8 and 12, Allen discloses a microphone assembly incorporated in a communication device, said microphone assembly comprising:

a microphone element adapted to convert acoustic energy into electrical energy;

a first acoustic transmission line adapted to transmit primary acoustic energy received at the input port of said first acoustic transmission line to an output port of said first acoustic transmission line coupled to a primary acoustic sound port of said microphone element (301, figures 3 and 4; column 3, lines 19-20);

and at least a second acoustic transmission line adapted to transmit secondary energy received at the input port of said second acoustic transmission line to an output port of said second acoustic transmission line coupled to a secondary acoustic sound port of said microphone element (302, figures 3 and 4; column 3, lines 19-20);

wherein the specific acoustic characteristic resistance of said acoustic transmission lines are substantially matched by the specific acoustic resistance of at least one acoustic impedance element

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positioned in each said acoustic transmission line, whereas standing waves are eliminated in the acoustic transmission allowing the relative and phase delays of acoustic energy propagating through said acoustic transmission lines be proportional to the length of said acoustic transmission lines (column 3, lines 32-45; column 4, lines 35-40); and

wherein the acoustic energy received by said microphone element via said second acoustic transmission line is subtractive(column 3, lines 26-30).

All elements of claims 9 and 13 are comprehended by the rejection of claims 8 and 12 (303,304, Figures 3 and 4; column 3,, lines 19-20; column3, lines 26-30).

#### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,651,074 to Baumhauer discloses a noise gradient microphone assembly.

U.S. Patent 5,226,076 to Baumhauer discloses a directional microphone assembly.

U.S. Patent 3,715,500 to Sessler et al. discloses unidirectional microphones.

U.S. Patent 3,657,490 to Scheiber discloses tubular directional microphone.

U.S. Patent 6,674,996 to Weckstrom discloses a mobile phone accessory having a pressure gradient microphone.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7654. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DEF



**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**